

ABSTRACT OF THE DISCLOSURE

When there exists an error between a model considered in feed-forward and an actual device, it is configured so as to enable the application of control having feed-forward such as predictive control without problem to reduce a model error. Furthermore, it is configured to enable more fine adjustment of the actual device by adjusting the balance of gains α and β . An operational unit is provided with an error signal calculation unit for outputting an error command and an error feedback value based on a position feed-forward signal and a position detection value, and an error compensation operation unit for controlling so that the error command and the error feedback value coincides with each other. This operational unit is provided at a control operation device.